

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method comprising:
selecting a protective area of a substrate;
~~providing~~performing a selective sputtering process to a surface of the
substrate to provide a first surface roughness over a first area of a substrate[[:]] and
~~providing to provide~~a second surface roughness over the selected protective area of the
substrate, the second surface roughness being different-smoother than the first surface
roughness, the selective sputtering process including using a mask to cover the selected
protected area of the substrate during the selective sputtering process.
2. (Original) The method of claim 1, wherein selecting the protective area comprises determining an area in which to prevent overflow of underfill material.
3. (Canceled)
4. (Currently Amended) The method of claim [[3]]1, wherein the selective
sputtering process provides less sputtering to the protective area than the first area such
that the protective area is smother than the first area.

5. (Currently Amended) The method of claim ~~[[3]]~~1, wherein the selective sputtering process comprises an oxygen plasma sputtering process.

6. (Currently Amended) The method of claim ~~[[3]]~~1, wherein the selective sputtering process comprises a hydrogen plasma sputtering process.

7. (Canceled)

8. (Original) The method of claim 1, further comprising providing an underfill material over the first area of the substrate.

9. (Currently Amended) The method of claim 1, wherein the protective area is selected to avoid underfill overflow into a particular area of ~~[[the]]~~a chip.

10. (Original) The method of claim 1, further comprising attaching a die over the first area of the substrate.

11. (Original) The method of claim 10, further comprising providing underfill material between the die and the substrate without overflowing the underfill material over all of the protective area.

12. (Original) The method of claim 1, wherein the substrate includes a solder resist.

13. (Currently Amended) A method comprising:

obtaining a substrate;

identifying a die placement area and a keep out area of the substrate;

forming-selective sputtering a surface of the substrate using a mask to provide a first surface roughness over the die placement area of a substrate and to provide a second surface roughness over a protective area over the substrate between the die placement area and the keep out area, the second surface roughness being smoother than the first surface roughness; and

flowing an underfill material over at least the die placement area of the substrate and preventing the underfill material from flowing over the protective area based on surface roughness.

14-15. (Canceled)

16. (Currently Amended) The method of claim ~~[[15]]~~13, wherein the selective sputtering process provides less sputtering to the protective area than the die placement area such that the protective area is smoother than the die placement area.

17. (Currently Amended) The method of claim ~~[[15]]~~13, wherein the selective sputtering process comprises an oxygen plasma sputtering process.

18. (Currently Amended) The method of claim ~~[[15]]~~13, wherein the selective sputtering process comprises a hydrogen plasma sputtering process.

19. (Canceled)

20. (Original) The method of claim 13, further comprising attaching a die over the die placement area of the substrate.

21. (Original) The method of claim 20, wherein flowing the underfill material comprises flowing the underfill material between the die and the die placement area of the substrate.

22. (Original) The method of claim 13, wherein the underfill material flows in the die placement area without flowing to the keep out area based on the surface roughness of the die placement area and the surface roughness of the protective area.

23. (Original) The method of claim 13, wherein the protective area is selected to avoid underfill overflow into the keep out area of the substrate.

24. (Original) The method of claim 13, wherein the substrate includes a solder resist.

25-30. (Canceled)

31. (New) The method of claim 1, wherein the first area comprises a die placement area.

32. (New) The method of claim 13, wherein the mask covers the protective area of the substrate.

33. (New) A method comprising:
selecting a protective area of a substrate; and
performing a selective chemical etching process to a surface of the substrate to provide a first surface roughness over a first area of a substrate and to provide a second surface roughness over the selected protective area of the substrate, the second surface roughness being smoother than the first surface roughness.

34. (New) The method of claim 33, wherein selecting the protective area comprises determining an area in which to prevent overflow of underfill material.

35. (New) The method of claim 33, further comprising providing an underfill material over the first area of the substrate.

36. (New) The method of claim 33, further comprising attaching a die over the first area of the substrate.